

Munters' air pre-heater provides an innovative solution for energy savings

A major oxidizer OEM in Ft. Lauderdale, FL, was in need of heat exchanger for a catalytic oxidizer system being sold to Andrx Pharmaceuticals. The pharmaceutical company's manufacturing line had hazardous airborne contaminants that needed to be exhausted out of the production area. To accomplish this, the process airstream went through an oxidizer system to provide 99% destruction of the airborne contaminants prior to the air-stream being vented to atmosphere. The OEM needed a heat exchanger that would utilize exhaust air heat in order to maximize the oxidizer's energy efficiency. The decision was to utilize a Munters Thermo-Z™ heat exchanger as a pre-heater in the system to provide energy savings by taking the 1200°F exhaust air temperature and using it to preheat the 100°F inlet air temperature to approximately 650°F.

Finding the Perfect Fit

This application required a 60,000 cfm airflow, normally requiring large multiple counterflow units in parallel. However, the space available was very limited, so the size of the footprint was a huge concern. This presented the challenge of providing a counterflow unit that would fit within the OEM's footprint limitations while still meeting their performance requirements.

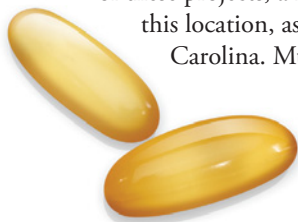
The solution was to use a Munters double-stacked design. Two identical counterflow units were stacked so as to have a system footprint that is the size of a single unit, roughly half the typical footprint. The design required a lot of internal and external structural support and specially designed plenums to direct the air appropriately to the inlets and outlets.

A Successful Relationship

The net result was a cost competitive, well-designed industrial heat exchanger that provided the smallest footprint available in the industry for similar unit performance. Munters met and conquered the challenge presented by the OEM. This is one of four Thermo-Z™ heat exchangers being used in conjunction with the oxidizers at Andrx Pharmaceuticals. Due to the success

of these projects, a fifth Thermo-Z™ installation is also underway at this location, as well as 3-4 additional units for a site in North Carolina. Munters innovation helped to secure our long-term

future with this OEM and developed a design that has tremendous implications throughout the high temperature energy recovery industry.



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CASE STUDY: Andrx Pharmaceuticals



BENEFITS

- Custom small footprint design
- Multiple heat exchangers stacked and integrated within a single outside casing
- Welded design with almost zero leakage enables the oxidizer to reach high destruction efficiencies

